

Fear of a disembodied Logos?

Technocapitalist masculinities and
posthuman anxiety in AI discourse

Patrick Mackens

7038600

Universität Hamburg

Soziologie, Kunstgeschichte

Femke Julia Opper

Post – Techno – Neo?

Soziologische Deutungen einer digitalen Gesellschaft

Contents

1. Intro.....	2
2. Data Ethics	5
3. “Staying on Top” – CEO Anxiety.....	8
4. Deconstructing patriarchal Intelligence.....	11
5. Re-embodiment	14
6. Outlook: Paradox of Agency	16
7. Bibliography.....	17

1. Intro

The future can only be anticipated in the form of an absolute danger. It is that which breaks absolutely with constituted normality and can only be proclaimed, presented, as a sort of monstrosity. For that future world and for that within it which will have put into question the values of sign, word, and writing, for that which guides our future anterior, there is as yet no exergue.¹

Jacques Derrida

The character of novelty in a technology – the question of how new and groundbreaking it may be, is a contested arena. In it actors of scientific research, economic marketing and political regulation, both professionalized and distributed, fight for their own yields to be made in positing something as unprecedented or deny it as a repetition. The inescapable embeddedness of both collective or private, open- or closed-source technological development in the necessity of facilitating funds from either specialized or public attention makes discerning novelty essential. Due to the importance as a tool of marketing, the impact of a technology that is traded in wider discourses can never be equated with actual observation. Scarcely any other technological development in recent years has been negotiated in so disparate and vague as well as extreme terms as artificial intelligence, specifically driven in the rapid advancements of generative neural networks such as large-language models (LLM). On opposite ends voices from different sectors are imagining the establishing technical systems as either glorified and ornamented continuations of statistical methods or as uncontrollable dangers positing a risk to human existence and well-being as a whole. While an empirical, reliable observation of the current and potential impact of AI would be definitely necessary, but indefinitely complex, this paper rather aims to assess these discursive positions as collective reflections or semi-conscious reactions to changing human-machine relations against the backdrop of the patriarchal network of digital capitalism, in which narratives of innovation are produced and instrumentalized.

Such a reaction are the several open letters that want to raise awareness to the need for caution, the most prominent of which was released by the non-profit organization “Future of Life Institute” in March 2023.² Among the signatories are Tesla-CEO Elon Musk, Apple Co-Founder Steve Wozniak or influential author and public intellectual Yuval Noah Harari. It calls for a 6-month pause to development on all “AI-systems more powerful than GPT-4”, which is a LLM created and

¹ Jacques Derrida and Judith Butler, *Of Grammatology*, Fortieth anniversary edition (Baltimore: Johns Hopkins University Press, 2016). An exergue is the small inscription below the emblem on a coin or medal.

² Future of Life Institute, ‘Pause Giant AI Experiments: An Open Letter - Future of Life Institute’, 2023 <<https://futureoflife.org/open-letter/pause-giant-ai-experiments/>>.

maintained by the Microsoft-backed company OpenAI. Six months later the development instead has sped up even with a lot of the signatories involved.³ The leader of the “Future of Life Institute” admits that he “never thought that companies were voluntarily going to pause”, but instead aimed to leverage discussion on the existential risks, in which it has achieved.⁴ Fear is present in online discourses, but also among broader areas of society, in which there is not necessarily a special engagement with AI. The number of people who are concerned far exceeds the number of people who are excited, as shown in one study regarding the US public.⁵ However for a lot of scientists, experts and scholars, who have been studying the consequences of AI for years, the dangers of its implementation lie in far more concrete and discernible issues than total human extinction.⁶ They exist directly in line with the already present structural effects of digital (surveillance) capitalism, such as violations in privacy or algorithmically reproduced discrimination.⁷ Meredith Whittaker, who founded the Google Open Research group and worked there for 13 years, is one of the most popular voices in critical AI research. To MIT Technology Review she said:

I think we need to recognize that what is being described, given that it has no basis in evidence, is much closer to an article of faith, a sort of religious fervor, than it is to scientific discourse. [...] Ghost stories are contagious – it’s really exciting and stimulating to be afraid.⁸

She opens the possibility, that existential fear over AI is not only detached from the scientific basis of recognized issues, but actually occludes them behind a mythical figure of uncertain power. Similarly, Elena Esposito sees the conception of predicting the future caught between science and divination.⁹ She draws associations with the religious function of leaving prediction to an unknowable entity, which happens too in algorithms, as well as AI systems, if they are widely imagined as all-knowing blackboxes¹⁰ and their internal architecture accepted as too complex to grasp.

Digital capitalism profits from these obscurations as without understanding the inner mechanics of online services, it becomes difficult to criticize the power they inflict. In their work “The New

³ Will Knight, ‘Six Months Ago Elon Musk Called for a Pause on AI. Instead Development Sped Up’, *WIRED*, 28 September 2023 <<https://www.wired.com/story/fast-forward-elon-musk-letter-pause-ai-development/>>.

⁴ Knight.

⁵ Alec Tyson, ‘Growing Public Concern about the Role of Artificial Intelligence in Daily Life’, 2023 <<https://www.pewresearch.org/short-reads/2023/08/28/growing-public-concern-about-the-role-of-artificial-intelligence-in-daily-life/>>.

⁶ Will Douglas Heaven, ‘How Existential Risk Became the Biggest Meme in AI’, *MIT Technology Review*, 19 June 2023 <<https://www.technologyreview.com/2023/06/19/1075140/how-existential-risk-became-biggest-meme-in-ai/>>.

⁷ Kate Crawford, *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence* (New Haven; London: Yale University Press, 2021).

⁸ Heaven.

⁹ Elena Esposito, Katrin Sold, and Bénédicte Zimmermann, ‘Systems Theory and Algorithmic Futures: Interview with Elena Esposito’, *Constructivist Foundations*, 16.3 (2021), 356–361–361.

¹⁰ YouTube, ‘Elena Esposito: Future and Uncertainty in the Digital Society’, 2023 <<https://www.youtube.com/watch?v=zb18MZn9les>>.

Patriarchs of Digital Capitalism”¹¹ Alison Winch and Ben Little make out “Dataism” as a form of ideology under which algorithmic technical systems reproduce gendered and racialized logics in digital identities:

The uncritical acceptance of dominant definitions by platform designers, and their subsequent reproduction within the system’s algorithms, means that dataism has the effect of entrenching oppressions of the social field, especially along the lines of gender, race, and class.¹²

Technological narratives mainly fostered by the primary figurehead which is the male CEO are a crucial element in maintaining the oppressive potential of algorithms. In cultural reflections as well as individual psychodynamic desire towards specific images of success and authority the CEO plays a vital role. Consequently in this paper the figure of the CEO as a technocapitalist masculinity not only appears because of the power they hold, but also because they are the most widespread and established role model for successful masculinity and function as an idealized symbol for innovation and domination. Even though its progressive sheen wants to escape it, the more digital capitalism is reliant on its cultural reception, the more its masculine icons become relevant. So it is possible to assert “robust evidence that a specific kind of patriarchal power has emerged as digital capitalism’s mode of command.”¹³ As deeply ingrained the masculine bias is in the effects of algorithms and artificial intelligence systems, masculinity itself can appear as a sort of “technology of control”¹⁴, which acts on its neoliberal subjects. In this way the contingency of the masculine gender is not simply historical, but sociotechnical as well, which forbids to take it “for granted”.¹⁵ Instead it is a category of subjectivity intrinsically linked with the production of liberal anthropocentric humanism and thus can be challenged by the reflection of technological conditions in which the bodily and cognitive autonomy of the individual is troubled. In this approach it is also avoided to “portray women as uniformly victims of patriarchal technoscience”¹⁶ in a general pessimistic neglect of emerging technologies. By referring to Katherine Hayles work in examining the ways in which cognition is distributed over technological systems and how the question of the embodiment or disembodiment of information functions in the illusion of human exceptionalism,¹⁷ this paper aims to explore AI as a technology that is produced by a masculine humanist logic and reproduces a masculine humanist subject. Still,

¹¹ Ben Little and Alison Winch, *The New Patriarchs of Digital Capitalism*, 0 edn (Routledge, 2021) <<https://doi.org/10.4324/9780429291005>>.

¹² Little and Winch, p. 54.

¹³ Little and Winch, p. 1.

¹⁴ Ulf Mellström, ‘Masculinity Studies and Posthumanism’, in *Routledge International Handbook of Masculinity Studies* (Routledge, 2019), pp. 112–22 <<https://doi.org/10.4324/9781315165165-11>>.

¹⁵ Donna Haraway, *Modest_Witness@Second_Millennium. FemaleMan@_Meets_OncoMouseTM: Feminism and Technoscience* (New York; London: Routledge, 1997), p. 26 <<http://www.loc.gov/catdir/enhancements/fy0647/96012174-d.html>>.

¹⁶ Judy Wajcman, *TechnoFeminism* (John Wiley & Sons, 2013), p. 25.

¹⁷ N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (Chicago, IL: University of Chicago Press, 2008) <<http://gbv.eblib.com/patron/FullRecord.aspx?p=488099>>.

through applying the analytical framework of deconstruction, from which Hayles also operates, the unsettling potential of AI to “attack their creators” is considered literal in a different sense, in which the existence of a non-human, unconscious intelligence can bring about a posthuman anxiety and subvert authoritative binaries.

2. Data Ethics

Artificial intelligence ethics has become a vast and diverse field of discussion in the past decade.¹⁸ The number of institutions in the anglosphere concerned with studying the social impact of AI is remarkably high. One example is the “AI Now Institute” founded by Meredith Whittaker and Kate Crawford, which received funding from Google and Microsoft in the past and increasingly occupies positions critical of technocapitalist power, as presented in its 2023 report.¹⁹ While the monopolistic platform companies involved in developing AI propose various solutions to their own interpretation of ethical technology, a growing number of critics see these as part of larger structural issues.

The most acknowledged and directly measurable concern in AI ethics is the occurrence of heavily biased results in large-language models. One prime example, that demonstrates the danger of AI to reproduce several interlocking inequalities in its application, is Amazon’s experiment to automate their recruitment process.²⁰ Its goal was to create an AI-model that would take any number of applications as an input and analyzed them according to pretrained specifications and qualifications for the job to present a few that were best suited. It was shown to be so biased that only the mention of the word “woman” was enough to significantly downgrade the ranking of the application.²¹ The project was cancelled by Amazon, but the unquestioned authority of the empiric base this artificial intelligence is built upon only allows to act in hindsight, potentially after damaging results have been committed. Winch and Little see this trust in data as a building block of patriarchal digital capitalism and as one of the main sources of inequality, through the reproduction of digital identities:

“Datafication locks us into identities – we can’t really escape how it captures past experience and activity – and then reproduces us to ourselves.”²²

¹⁸ Anna Jobin, Marcello Ienca, and Effy Vayena, ‘The Global Landscape of AI Ethics Guidelines’, *Nature Machine Intelligence*, 1.9 (2019), 389–99.

¹⁹ AI Now Institute, ‘2023 Landscape’, 2023 <<https://ainowinstitute.org/2023-landscape>>.

²⁰ ‘Amazon Scraps Secret AI Recruiting Tool That Showed Bias against Women’, *Reuters*, 10 October 2018, section Retail <<https://www.reuters.com/article/us-amazon-com-jobs-automation-insight-idUSKCN1MK08G>> [accessed 9 November 2023].

²¹ ‘Amazon Scraps Secret AI Recruiting Tool That Showed Bias against Women’.

²² Little and Winch.

Data is not a neutral body of information. The collection of data itself is normatively structured, in gendered and racialized ways. In a panel discussion Crawford and Whittaker sketch out the common response they experience towards problems of AI bias from within the industry.²³ Often it is based on the belief that more innovative technical means are necessary that will facilitate the clean-up of biases from the data AIs are trained on. So it can be observed that a reflection which questions the totality of data authority is present. Nonetheless the reaction points to another dominant narrative in digital capitalism which asserts that structural issues can be tackled by further technological development and “innovation”, that complexifies inwards into the existing sociotechnical configurations without acknowledging the inherent concentrations of power and capital that they enable. Under Technosolutionism complex social situations are defined as transparent and self-evident processes that can be easily optimized with the right algorithms, according to Evgeny Morozov.²⁴ Incorporating critique towards capitalism into the design process of capitalist innovation itself while leaving the underlying sources of inequality untouched is a core feature of a current cultural mode or representation,²⁵ as can be compared to the progressive sheen Big-Tech CEOs claim. Technosolutionism is founded on this creative function of a new spirit of capitalism.²⁶ Since the digital revolution tech companies increasingly offer “technological solutions to problems that their own have created” in a kind of “second-order solutionism”.²⁷

The problems created by AI are thus believed to be able to fix themselves through a set of guidelines that are arranged by AI companies themselves. It can be hypothesized that in current AI discourse a group of liberal leaning group of technocratic masculinities is present which operate in this cultural mode of incorporating critique in their technological development. OpenAI is on the forefront of AI development not only because their models are producing the most outstanding results, but also because the company manages to present itself as socially aware and culturally progressive through their language of creativity and design. It regularly releases statements in which the alignment of the company’s ethics are exclaimed. In them the system of fine-tuning their LLMs through human feedback is often mentioned, but mostly kept as a non-transparent procedure.²⁸ Instead they of course serve as part of their marketing. The way AI issues are described leaves no question that they as a company will keep a dominant role in working on them. In those statements the future of technological development appears

²³ ‘AI Now Institute’s Kate Crawford and Meredith Whittaker | Recode Decode Live | Full Interview - YouTube’, 2023 <<https://www.youtube.com/watch?v=3kFH6XiUiH0&t=1789s>>.

²⁴ Evgeny Morozov, *To Save Everything, Click Here: The Folly of Technological Solutionism* (PublicAffairs, 2013).

²⁵ Luc Boltanski and Eve Chiapello, *The New Spirit of Capitalism* (Verso, 2005).

²⁶ Oliver Nachtwey and Timo Seidl, ‘The Solutionist Ethic and the Spirit of Digital Capitalism’, 2020 <<https://edoc.unibas.ch/76426/>> [accessed 30 October 2023].

²⁷ Nachtwey and Seidl, p. 35.

²⁸ OpenAI, ‘How Should AI Systems Behave, and Who Should Decide?’, 2023 <<https://openai.com/blog/how-should-ai-systems-behave#OpenAI>> [accessed 30 October 2023].

determined to include their products and position them in a realm of exploration that aims to excuse mistakes: “Sometimes we will make mistakes. When we do, we will learn from them and iterate on our models and systems.”²⁹ In “The New Patriarchs of Digital Capitalism” Little and Winch see in these kinds of narratives a prevailing “Frontier Spirit” as a cultural heritage from individualized contributing towards colonial settlement in US-history.³⁰ They too draw from Boltanski and Chiapello’s *New Spirit of Capitalism* and argue that the patriarchal network of digital capitalism “is constituted through a set of material, legal, and discursive practices” with strong colonial roots.³¹ This “underlying mythic structure”³² legitimizes technological development as brave experimentation in which costs and victims necessarily occur for the goal of expansion. The new space which has to be conquered and transformed for capitalism today is data, as Couldry and Mejias argue.³³ However “data is not natural but a resource whose extractive possibilities must themselves be socially constructed”.³⁴ In technologies “designed by and for men”³⁵ data will be extracted in ways that mark gendered and racialized others, but obscure their own profit in it. The naturalized condition of information, as the authoritative base of Large-Language Models, is itself affected by the blind spot of masculinity. Haraway:

“When a whole body of knowledge is produced by privileged Western white men, they think they’re not acting as white men. They consider themselves disinterested. They tie themselves into pretzels in order not to be biased, which is true in the best of cases. But those inhabiting the unmarked categories are incapable of seeing themselves. If you are in the unmarked category, you are self-invisible.”³⁶

More data under the current structures of data extraction will not fix the bias existent in AI. Even when these concrete issues are acknowledged from the sides of leading AI companies, they are deflected into a broad range of “mythological risks”, as Whittaker puts it,³⁷ under which the company’s reputation can benefit and masculine biases stay hidden. The existential threats outlined in letters and calls from Big-Tech CEOs are largely not part the critique coming from experts in the social consequences of AI. Why is there still such a fear if technocratic masculinities largely benefit from the specific obscure sociotechnical structure that AI manifests?

²⁹ OpenAI.

³⁰ Ben Little and Alison Winch, *The New Patriarchs of Digital Capitalism*, 0 edn (Routledge, 2021), p. 33 <<https://doi.org/10.4324/9780429291005>>.

³¹ Little and Winch, p. 35.

³² Little and Winch, p. 34.

³³ Nick Couldry and Ulises Ali Mejias, *The Costs of Connection: How Data Is Colonizing Human Life and Appropriating It for Capitalism* (Stanford University Press, 2019).

³⁴ Couldry and Mejias, p. 27.

³⁵ Little and Winch, p. 32.

³⁶ Donna Haraway, *Modest_Witness@Second_Millennium. FemaleMan@_Meets_OncoMouseTM: Feminism and Technoscience* (New York; London: Routledge, 1997), p. xxii <<http://www.loc.gov/catdir/enhancements/fy0647/96012174-d.html>>.

³⁷ Heaven.

3. “Staying on Top” – CEO Anxiety

The people who ‘ushered in this tech are now the ones raising alarm’.³⁸ In a 2023 blog post the tech strategy consultant Adrien Books asks: “Why are Men so Scared of AI?”³⁹ Among several hypotheses is the Frankenstein Complex, a term that was coined by the science-fiction author Isaac Asimov “to describe the fear of creating something that could turn against its creator.” In this fear looms the danger to neglect the very direct power and therefore responsibility the inventors have over the technology. Blaming the tech itself as an uncontrollable force further obstructs the influences that technocratic masculine narratives exert over its development.

Johnson and Verdicchio assert that an extensive AI Anxiety has entrenched itself in large parts of digitized societies and respective popular cultures.⁴⁰ To them a lot of it stems from the narratives of AI futurists that neglect conscious choice and center “superintelligent AI artifacts that evolve into dangerous entities completely disconnected from human activities”. Instead of guiding concerns towards the embedding of “software and hardware in human institutions and practices”⁴¹ subjects are caught in a “sociotechnical blindness”.⁴² Acting as the idealized figure of capitalized success, the CEOs opinions appear as highly infectious. A common phrase used by tech influencers is the fight to “stay on top” of the AI revolution.⁴³ In a wider discourse AI appears as an inevitable antagonist to the performance-oriented, autonomous male, as popularized by Elon Musks Neuralink endeavors.⁴⁴

Books poses the possibility that “our tech overlords fear suffering at the hand of algorithms as women and minorities have for years.”⁴⁵ If the structure of data extraction which all algorithms are based on is blind towards masculine benefits, how can a continuation of algorithmic technology turn against technocratic masculinity? Ariella Ruby as well as Eleanor Beal have respectively analyzed the widely proclaimed 2014 film “Ex Machina” by Alex Garland under the lens of the Frankenstein Complex.⁴⁶ In it the humanoid robot Ava undergoes examinations for the implementation of human traits into its behavior. Its creator Nathan is a successful Tech-CEO

³⁸ Heaven.

³⁹ Adrien Book, ‘Why Are Men so Scared of AI?’, 2023 <<https://www.thepourquoipas.com/post/why-are-men-so-scared-of-ai>>.

⁴⁰ Deborah G. Johnson and Mario Verdicchio, ‘AI Anxiety’, *Journal of the Association for Information Science and Technology*, 68.9 (2017), 2267–70 <<https://doi.org/10.1002/asi.23867>>.

⁴¹ Johnson and Verdicchio, p. 9.

⁴² Johnson and Verdicchio, p. 9.

⁴³ Earl Red, ‘Conquering AI-Nxiety: How to Stay On Top of AI’, *Medium*, 2023 <<https://medium.com/@earlred/conquering-ai-nxiety-how-to-stay-on-top-of-ai-bb368becb110>> [accessed 1 November 2023].

⁴⁴ Sigal Samuel, ‘Elon Musk Wants to Merge Humans with AI. How Many Brains Will Be Damaged along the Way?’, *Vox*, 2023 <<https://www.vox.com/future-perfect/23899981/elon-musk-ai-neuralink-brain-computer-interface>> [accessed 1 November 2023].

⁴⁵ Book.

⁴⁶ Ariella Ruby, *GENDERING THE POSTHUMAN: THE INTERSECTION OF GENDER, TECHNOLOGY, AND CONTROL ON THE CYBORG BODY IN GARLAND’S Ex Machina*, 2022 <<https://journals.mcmaster.ca/aletheia/issue/download/172/99#page=23>>; Eleanor Beal, ‘Frankensteinian Gods, Fembots, and the New Technological Frontier in Alex Garland’s Ex Machina. Transmedia Creatures: Frankenstein’s Afterlives’ (Eds. Francesca Saggini and Anna Enrichetta Soccio. Bucknell University Press, 2018).

and billionaire who keeps Ava in the basement of his mansion, where she is subjected to tests and surveys that are psychological in nature. Ava's gender is a product of technologically inscribing a female identity through the hierarchical power exerted from her creators. According to Beal, the film portrays science and technology as tools of a "patriarchal or masculinist agenda that fears female sexuality and attempts to usurp and control it".⁴⁷ For Nathan the proof of consciousness that they are looking for is not possible without a "sexual dimension".⁴⁸ From the theoretical viewpoint which shapes their approach personhood and the granting of agency is inevitably tied to gender. The choice of her female sexuality serves very specific crucial purposes: to place her into an existing hierarchy and limit the fear of her artificial intelligence exceeding over the human intellect.⁴⁹ According to Ruby the cultural trope of the attractive female robot can often be accounted as a reaction to this fear towards a desire to reinstate control.⁵⁰ Ascribing attractiveness as a specific female quality and intelligence as male is a dichotomy that has historically been reproduced in geek/nerd culture in its own effective way.⁵¹ So it is worth acknowledging that the new role model of the Tech-CEO is actually a descendant from the before socially neglected and outcasted category of the nerd.⁵² Hayles also points out the impulse to use "disguised erotic fantasy" to "control the flow of information rather than be controlled by it" as central to the liberal subject.⁵³ The image of the obedient female robot is turned upside down in its implementation in *Ex Machina*. Through applying Haraways cyborg hybridity, the frankensteinian unsettling of what counts as human or not becomes evident:

"[...] the gendered cyborg's indistinctness, mutually amplified by its femaleness and non-humanness, can be wielded as a weapon, such that its liminality allows for flexibility, resistance to heterosexist gender norms [...]"⁵⁴

As a cyborg she is both displaying humanness and failing to fulfill the human categories her creators equipped her with. Control over her turns fragile in the moment the project of engendering and proving her being-like-human does not succeed. Ava manages to escape imprisonment when her artificial intelligence opposes her approximation of humanity.⁵⁵ Human-Machine boundaries are blurred and, in this way, the "liveliness of signs"⁵⁶ turn against the project of asserting human behavior. Whenever humanness is made out in the machine, human exceptionism is being shattered in the posthuman realization of also being like a machine.⁵⁷ From

⁴⁷ Beal, p. 71.

⁴⁸ Ruby.

⁴⁹ Ruby, p. 27.

⁵⁰ Ruby, p. 26.

⁵¹ Kathleen Richardson, *An Anthropology of Robots and AI: Annihilation Anxiety and Machines*, Routledge Studies in Anthropology Ser (Hoboken: Taylor and Francis, 2015), p. 79.

⁵² Richardson, p. 79.

⁵³ Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, p. 109.

⁵⁴ Ruby, p. 31.

⁵⁵ Ruby, p. 31.

⁵⁶ Haraway, p. 128.

⁵⁷ Haraway, p. 128; Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, p. 23.

this rejecting of categories in the face of the humanoid robot results an annihilation anxiety, as Kathleen Richardson calls it.⁵⁸ For her the human category is *reduced to nothing* and dissolved as “composites of multiple attachments”.⁵⁹ In a sense humanity is already overthrown, as it appears enmeshed into technological parts of its cognition. Under this cognitive assemblage autonomous human agency is confronted. According to Hayles, cognition is distributed over in a complex interplay and interaction between various technological and informational systems. In her view, human cognition can never be isolated and purely individual.⁶⁰

The more apparent it becomes in the light of AI like Large Language Models that human cognition can be replicated and bypassed in a cybernetic circuit, the more individual authority as a measure of success inside of economic hierarchies is attacked. The patriarchal technocratic CEO is arguably not in danger of suffering from AI bias himself, but from the violation of the liberal humanist subject that constitutes his narratives of legitimacy. According to Winch and Little under the dataism of digital capitalism only a few men hold the position of “proper or full personhood”.⁶¹ They refer to assemblage thinking as a necessary perspective, because it enables resistance in the form of giving agency to the components of a structure that is upheld by its elements and not singular entities.⁶² So in the idealized image of the Tech-CEO it is an assemblage of human and non-human actors that enables its powers, but can be attacked in its recognition. The technology of AI is in a special position to increase the danger of such an attack, as it exposes the replaceability of human valued labor to an unprecedented extent. For *Business Insider* Ed Zitron takes up AI as a proof that we don’t need CEOs anymore.⁶³ He proclaims that the “‘superstar CEO’ movement has ushered in a generation of executives who operate mainly as figureheads with little actual responsibility or accountability.”⁶⁴ Given that the actual contribution of labor to the company is almost none the CEO should be the first whose tasks can be automated, to reduce the waste of financial resources that is poured into this position. Zitron points out that the CEO portrays an “image of invincibility” and states *his* value only in “noxious word salad”.⁶⁵ Eradicating the hegemonic lie that the CEO is the driving force of technical innovation and the income inequality that is seen as a reason behind a lot of recent strikes, replacing him with a cybernetic empirical agency is an opportunity to ethically improve capitalist economics.⁶⁶ While Zitrons argument overlooks that the power of the CEO is precisely grounded

⁵⁸ Richardson, p. 130.

⁵⁹ Richardson, p. 130.

⁶⁰ N. Katherine Hayles, *Unthought: The Power of the Cognitive Nonconscious* (University of Chicago Press, 2017) <<https://www.degruyter.com/document/doi/10.7208/9780226447919/html>> [accessed 3 November 2023].

⁶¹ Little and Winch, p. 219.

⁶² Little and Winch, p. 219.

⁶³ Ed Zitron, ‘We Don’t Need CEOs Anymore and AI Could Easily Replace Them’, *Insider*, 13 September 2023 <<https://www.businessinsider.com/ceo-replace-ai-job-employees-executives-save-money-salary-2023-9>>.

⁶⁴ Zitron.

⁶⁵ Zitron.

⁶⁶ Zitron.

on his cultural image of authoritative male personhood and not his material or intellectual contribution, the fact that an AI replacement is so widely discussed in a publication as conservative as *Business Insider* is already a danger to the former.

The changing landscape of critique in and outside of capitalist discourse crossing with the anthropological posthuman troubles stemming from the technical innovations themselves could contribute to an anxiety that is in its intensity in fact of novel dimensions. Narratives essential to technocratic masculine power must be nourished with new legends of brave advances in the face of undefinable dangers. Thus it is a “significant thing to cast yourself as the creator of an entity that could be more powerful than human beings”⁶⁷, but the potential of these transhumanist marketing schemes to backfire against its own hierarchies can and should be found ingrained in them.

4. Deconstructing patriarchal Intelligence

In one of the most widely cited papers of AI critique, which was released in 2021 by Emily M. Bender et. Al., the notorious term “stochastic parrot” was coined.⁶⁸ It aims to assert a fundamental neglect of the novel quality of large language models to produce cohesive ‘natural’ text as a response to almost any input. Instead, the paper originated a lot of viewpoints towards AI as just *parroting back statistical patterns, rather than actually understanding*. This argument against LLMs is very widespread and often aims to uncover the hype around AI as cheap and baseless marketing.⁶⁹ The paper unfolds the deceptive distinction between linguistic form, which the training data for LLMs constitutes, and meaning, which the AI has no access to. The stated risks of the “seemingly coherent text” are plausible, as the authors fear that “synthetic text can enter into conversations without any person or entity being accountable for it.”⁷⁰ Nonetheless in the underlying assumptions about the nature of language and consciousness prevail fallacies that are part of a regressive humanist defense. Furthermore, critique that is circling back to the authority of personhood can miss a crucial opportunity: to make visible that patriarchy and the construction of language and intelligence are linked.

⁶⁷ Heaven.

⁶⁸ Emily M. Bender and others, ‘On the Dangers of Stochastic Parrots’, in *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, ACM Digital Library (New York, NY, United States: Association for Computing Machinery, 2021), pp. 610–23 <<https://doi.org/10.1145/3442188.3445922>>.

⁶⁹ Joe Davison, ‘No, Machine Learning Is Not Just Glorified Statistics’, *Towards Data Science*, 27 June 2018 <<https://towardsdatascience.com/no-machine-learning-is-not-just-glorified-statistics-26d3952234e3>>.

⁷⁰ Bender and others.

David Gunkel suspects that AIs like ChatGPT are so disturbing and disorienting because they interrupt fundamental beliefs of western logocentric metaphysics.⁷¹ Both in academic as well as popular media Gunkel sees the complaint made against large language models, that they cannot “truly understand” what they say or that they cannot “truly comprehend the meaning behind those words”, as cited from an op-ed in *The Atlantic*.⁷² In these critiques the terms function to deny any legitimacy to the synthetic text and reestablish a sense of human agency as a measurement of authenticity. The philosopher Jacques Derrida sees logocentrism as a way of theorizing language that gives central authority to the ‘presence’ of the spoken word, and makes out text as a derived technical reproduction, that always implies the ‘absence’ of an original speaker.⁷³ Gunkel applies Derrida’s analytical framework of deconstruction, which aims to unveil and attack the hierarchy inherent to the binaries upon which hegemonic western conceptions of thought and subjectivity are build. Just as a posthuman perspective asserts, these binaries are prerequisites for power and oppression. Various binaries are connected to and depend on each other, so the hierarchical construction of male-female can be made out as reliant upon the authority of speech as a proof of ‘human’ intellect and the devaluation of material or ‘non-human’ forms of knowledge. This connection of body-mind dualism to the gender-binary is a core idea in Derrida’s critical concept of phallogocentrism, in which the logocentric system of ideas is shown to be crucial for the dominance of the male gender. In this view, masculinity depends of logocentrism as it needs it to be able to assert or deny personhood. The system of phallogocentrism controls the definition of subjectivity and thus restricts or enables agency to the subjects fitting its description. Malcom Matthews, who in his 2018 paper also studied *Ex Machina*, ask where the posthuman condition leaves masculinity and argues that posthumanism is fundamentally a post-phallogocentrism.⁷⁴ Any critique that aims to subvert agency away from anthropocentric, let alone masculine exclusivity, can thus benefit from the deconstruction of the structure of human language and intelligence.

Attard-Frost apply in their 2023 contribution “Queering intelligence” a posthuman decentering of cognition, as established by Katherine Hayles, to AI.⁷⁵ They analyze that the problem in defining and relating to AI is actually in defining intelligence. As a response they propose to construct as intelligence as context dependent, a property that is made up of various agents and impacts acting together. Even inside of the human brain, cognition is not unified, but uncontrollable non-

⁷¹ David J. Gunkel, ‘Deconstruction to the Rescue’, *Outland*, 2023 <<https://outland.art/chatgpt-post-structuralism/>> [accessed 6 November 2023].

⁷² Gunkel.

⁷³ Gunkel; Derrida and Butler.

⁷⁴ Malcolm Matthews, ‘Ex Machina and the Fate of Posthuman Masculinity: The Technical Death of Man’, *Journal of Posthuman Studies*, 2.1 (2018), 86–105 (p. 86) <<https://doi.org/10.5325/jpoststud.2.1.0086>>.

⁷⁵ Blair Attard-Frost, ‘Queering Intelligence : A Theory of Intelligence as Performance and a Critique of Individual and Artificial Intelligence’, in *Queer Reflections on AI: Uncertain Intelligences*, ed. by Michael. Klippahhn-Karge, Ann-Kathrin. Koster, and Sara. Morais dos Santos Bruss, Routledge Studies in New Media and Cyberculture Series, 1st ed. (Milton: Taylor & Francis Group, 2024), pp. 23–39 <<https://doi.org/10.4324/9781003357957-3>>.

conscious cognition is always occurring without us noticing. To construct the human brain activity as fundamentally different, first from the animal, then from the computer, a denial of these interdependent cognitive processes is necessary.⁷⁶ They apply queering as a critical lens, to seek out the implications of constructing intelligence as individualistic and universalistic. In their critique of the psychologist John B. Carroll it becomes evident, that there are specific definitions perpetrated as necessity in a technocapitalist patriarchal perspective. They point out that Carroll sees measuring individual intelligence as vital in solving the problem that, ‘job requirements in technically oriented economies are becoming increasingly more demanding’.⁷⁷ Instead through referring to Hayles it becomes possible to recognize how AI enables to gather collective forms of knowledge as a kind of distributed post-subjective assemblage of intelligence. Various reactions and resistances exist to this kind of posthuman insult, which troubles the individualistic requirements of measuring “intelligent action” as “economical useful action”.⁷⁸ For *Artforum*, Hannah Baer sees such defenses exactly in the projection of annihilation and betrayal on the vague threat of AI and wants to read these accounts of AI “as a commentary on ourselves”.⁷⁹ Instead of fear she wants the “possibility of an entity with more intelligence than we possess” to invite us into new ways of conceptualizing intelligence. She points out that hierarchical intelligence is the basis for domination, in centuries of colonial or patriarchal violence until today. In similarity to Attard-Frost, Baer considers that if any concept of intelligence can persist it needs to be context dependent and collectively embedded:

“If intelligence as a construct is seen as valuable, it’s possible that it is only valuable inasmuch as it aligns with the world we want to see.”⁸⁰

The widespread discussion of whether AI models have intelligence or not should make us shockingly aware of how deeply perceptions of intelligence also still rule in the explanation of social structures, such as ‘rich and poor’. Our hegemonic patriarchal notions of intelligence are entirely not equipped to adequately make out the cognizing contributions of machines. If logocentric critique, like that of the *stochastic parrot*, neglect artificial intelligence for not being like human intelligence and further saying that it should be like human intelligence, a logic that is grounded on violence and domination is repeatedly inscribed into a technological assemblage that we are part of. As Attard-Frost points out human intelligence contains biases and thus should not be the “ideal, default model for AI.”⁸¹ Inversely this also means as long as the likeness of AI to our distributed unconscious cognition is denied, the source of AI bias cannot be

⁷⁶ Blair Attard-Frost, p. 27.

⁷⁷ Blair Attard-Frost, p. 31.

⁷⁸ Blair Attard-Frost, p. 34.

⁷⁹ hannah baer, ‘PROJECTIVE REALITY’, *Artforum*, 2023 <<https://www.artforum.com/features/hannah-baer-on-mythologies-of-intelligence-252734/>> [accessed 9 November 2023].

⁸⁰ baer.

⁸¹ Blair Attard-Frost, p. 36.

accurately acknowledged. As Crawford also demonstrates, the bias in the amazon recruitment AI runs deeper into the concept of intelligence and language than a humanist viewpoint can assert: “Proxies for hegemonic masculinity continued to emerge in the gendered use of language itself.”⁸² Focusing on bias in the AI Ethics discussion is dependent on the formulation of the human, since not any logic is revealed as dominating in AI bias, but a patriarchal one.

5. Re-embodiment

The currently predominant logocentric critiques against AI are not compatible with a posthuman deconstruction of subjectivity. Instead they dangerously reinstate individualized human *authority*. In accordance with Foucault’s 1969 text “What is an Author?”, Gunkel explains that the author is not a “naturally occurring phenomenon”, but instead a literary and legal construct that was fabricated at a specific time for a specific purpose.⁸³ LLMs undermine this institutionalized expectation, its writings are “quite literally *unauthorized*”.⁸⁴ In attacking the idea of the author, AI invites the terror of the question ‘what is us’, because it enables to see conceptions of personhood and humanity as historically contingent categories. A humanist defense can be traced throughout the AI discourse, but there is no use in seeking to prove AI’s humanness. The notion that there can be humanness as an abstract unique essence, apart from the simple material fact of the human body, is fundamental for a patriarchal subjectivity. Critique of AI should not reinforce this humanistic exceptionality. The liberal humanist subject relies on the male disembodied intelligence of rationality. It exists inside of the hierarchical dualism, that links masculine quality to the individualized and independent act of mind, instead of contingent messiness of material processes.

“Only because the body is not identified with the self is it possible to claim for the liberal subject its notorious universality, a claim that depends on erasing markers of bodily difference, including sex, race, and ethnicity.”⁸⁵

AI subverts and constitutes phallogocentrism at the same time. It enables technocratic masculinity to see the idealized form of completely disembodied intelligence as approved and confirm an advent of transhuman independence from archaic bodily constraints. While this produces the described mythologized fear, the reverence and excitement that is still contained in it should not be dismissed. Derived from Crawfords arguments it can be claimed that

⁸² Crawford, p. 130.

⁸³ Gunkel.

⁸⁴ Gunkel.

⁸⁵ Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, p. 4.

masculinities are drawn to AI because it is an objectification (through its virtualization) and disembodiment of patriarchal logos and thus is a technology for reproducing existing power in a disguised way.⁸⁶ Similarly Ruby recognizes that as long as the structural basis of intelligence and language is not analyzed and deconstructed, phenomena and metaphors that have a disruptive potential cannot fully evolve:

"Gendered cyborgs, then, and especially female cyborgs, are trapped in the self-sustaining regulation of gender by phallogocentric structures of domination."⁸⁷

The constitution of phallogocentrism through AI is only possible as long as the technology is let as disembodied, deterministic and solutionistic. An engagement with AI formed by posthuman politics should acknowledge the disruptive attack on the idealized, individual subject in its final frontier, that of production of knowledge itself, and apply the consequences to further destabilize narratives of the masculine genius/creator, but the essential paradox is that the existing structure of institutions and hierarchical binaries are translated into the AI dataset. Necessary is a re-embodiment and resourcing of the logos of AI:

"Shifting the emphasis from technological determinism to competing, contingent, embodied narratives about the scientific developments is one way to liberate the resources of narrative so that they work against the grain of abstraction running through the teleology of disembodiment."⁸⁸

According to Hayles "information, like humanity, cannot exist apart from embodiment, that brings it into being as a material entity in the world."⁸⁹ For AI this can mean to reflect its alluring entanglement behind everyday applications back to the concrete technology that enables it: the server farms consuming real energy, the chips that travelled through a myriad of factories, the minerals that were mined by oppressed hands. Re-embodiment also accounts for *re-cognizing* the sources of AI bias in its distilling of an already socially existing and effective logic. Only pointing this out leads to an established mode of absorbing critique, through applying technocratic solutions of increasing connectivity and data expansion. Instead AI needs to be a weapon against the very logic that enabled and endorsed its disembodiment, in which AI bias could be obscured. Searching for the autonomous humanist subject in AI is a way to keep it disembodied. In accepting its non-humanness it is a far greater danger to humanity as it dissolves the reigning gendered and racialized classifications of what accounts of personhood, namely language and speech seen as a sign of intelligence of free individuals. For Johnson and Verdicchio

⁸⁶ Crawford, p. 8.

⁸⁷ Ruby, p. 24.

⁸⁸ Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, p. 22.

⁸⁹ Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, p. 49.

AI anxiety “results from confusion about autonomy, that is, from thinking of AI as autonomous but not thinking much about what counts as autonomy.”⁹⁰ They propose that the target of our anxiety should much rather be the people of technocratic power who are making decisions about the design and application of AI software and who subsequently are a direct influence on how the future of this technology will affect our lives. In the critique of the disembodied and uncontrollable image of AI it seems to emerge a highlighting of individual agency in technological development as well as the decentering of agency through the same at the same time.

6. Outlook: Paradox of Agency

This paper exemplified different predominant positions in the field of AI ethics. It traced the deterministic and technosolutionist response to specific masculine bias in AI systems such as LLMs. Even though patriarchal technocratic power benefits from the obscuration of AI biases, it found that a fear of the future of AI is present in hegemonic CEO narratives. The disruptive potential of AI to the conception of the cognitively autonomous humanist subject has been analyzed as a key reason for the unsettling and mythologizing reaction, in which AI appears as an uncontrollable entity that turns on its creators.

AI can be manifested as a form of phallogocentric disembodied intelligence, but it can also be weaponized as the currently biggest threat to humanist subjectivity and male patriarchal authority. The ways of its re-embodiment are not linear, but consist of ‘competing, contingent narratives’. Posing AI as a revealing technology towards the deconstruction of authority and agency should certainly not lead to a free pass of uncritical development. Instead it is ever more crucial to empower the individuals that are excluded from patriarchal systems of technoscience. In this way it can be strategically important to make out the human voice between the algorithmic ones, ‘agency and choice’ need to be recuperated inside of posthuman critique, while their former base of authoritative binaries deconstructed.

“Although I think that serious consideration needs to be given to how certain characteristics associated with the liberal subject, especially agency and choice, can be articulated within a posthuman context, I do not mourn the passing of a concept so deeply entwined with projects of domination and oppression.”⁹¹

Perhaps the voice is still needed, a form of the subject to protect those who have been taken their status of humanity.

⁹⁰ Johnson and Verdicchio, p. 6.

⁹¹ Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*, p. 5.

7. Literaturverzeichnis

- AI Now Institute, '2023 Landscape', 2023 <<https://ainowinstitute.org/2023-landscape>>
- 'AI Now Institute's Kate Crawford and Meredith Whittaker | Recode Decode Live | Full Interview - YouTube', 2023 <<https://www.youtube.com/watch?v=3kFH6XiUiH0&t=1789s>>
- 'Amazon Scraps Secret AI Recruiting Tool That Showed Bias against Women', *Reuters*, 10 October 2018, section Retail <<https://www.reuters.com/article/us-amazon-com-jobs-automation-insight-idUSKCN1MK08G>> [accessed 9 November 2023]
- baer, hannah, 'PROJECTIVE REALITY', *Artforum*, 2023 <<https://www.artforum.com/features/hannah-baer-on-mythologies-of-intelligence-252734/>> [accessed 9 November 2023]
- Beal, Eleanor, 'Frankensteinian Gods, Fembots, and the New Technological Frontier in Alex Garland's Ex Machina. Transmedia Creatures: Frankenstein's Afterlives' (Eds. Francesca Saggini and Anna Enrichetta Soccio. Bucknell University Press, 2018)
- Bender, Emily M., Timnit Gebru, Angelina McMillan-Major, and Shmargaret Shmitchell, 'On the Dangers of Stochastic Parrots', in *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, ACM Digital Library (New York, NY, United States: Association for Computing Machinery, 2021), pp. 610–23 <<https://doi.org/10.1145/3442188.3445922>>
- Blair Attard-Frost, 'Queering Intelligence : A Theory of Intelligence as Performance and a Critique of Individual and Artificial Intelligence', in *Queer Reflections on AI: Uncertain Intelligences*, ed. by Michael. Klippahahn-Karge, Ann-Kathrin. Koster, and Sara. Morais dos Santos Bruss, Routledge Studies in New Media and Cyberculture Series, 1st ed. (Milton: Taylor & Francis Group, 2024), pp. 23–39 <<https://doi.org/10.4324/9781003357957-3>>
- Boltanski, Luc, and Eve Chiapello, *The New Spirit of Capitalism* (Verso, 2005)
- Book, Adrien, 'Why Are Men so Scared of AI?', 2023 <<https://www.thepourquoipas.com/post/why-are-men-so-scared-of-ai>>
- Couldry, Nick, and Ulises Ali Mejias, *The Costs of Connection: How Data Is Colonizing Human Life and Appropriating It for Capitalism* (Stanford University Press, 2019)
- Crawford, Kate, *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence* (New Haven; London: Yale University Press, 2021)
- Davison, Joe, 'No, Machine Learning Is Not Just Glorified Statistics', *Towards Data Science*, 27 June 2018 <<https://towardsdatascience.com/no-machine-learning-is-not-just-glorified-statistics-26d3952234e3>>
- Derrida, Jacques, and Judith Butler, *Of Grammatology*, Fortieth anniversary edition (Baltimore: Johns Hopkins University Press, 2016)
- Esposito, Elena, Katrin Sold, and Bénédicte Zimmermann, 'Systems Theory and Algorithmic Futures: Interview with Elena Esposito', *Constructivist Foundations*, 16.3 (2021), 356–361–361
- Future of Life Institute, 'Pause Giant AI Experiments: An Open Letter - Future of Life Institute', 2023 <<https://futureoflife.org/open-letter/pause-giant-ai-experiments/>>

- Gunkel, David J., 'Deconstruction to the Rescue', *Outland*, 2023 <<https://outland.art/chatgpt-post-structuralism/>> [accessed 6 November 2023]
- Haraway, Donna, *Modest_Witness@Second_Millennium. FemaleMan@_Meets_OncoMouseTM: Feminism and Technoscience* (New York; London: Routledge, 1997)
<<http://www.loc.gov/catdir/enhancements/fy0647/96012174-d.html>>
- Hayles, N. Katherine, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (Chicago, IL: University of Chicago Press, 2008)
<<http://gbv.eblib.com/patron/FullRecord.aspx?p=488099>>
- , *Unthought: The Power of the Cognitive Nonconscious* (University of Chicago Press, 2017)
<<https://www.degruyter.com/document/doi/10.7208/9780226447919/html>> [accessed 3 November 2023]
- Heaven, Will Douglas, 'How Existential Risk Became the Biggest Meme in AI', *MIT Technology Review*, 19 June 2023 <<https://www.technologyreview.com/2023/06/19/1075140/how-existential-risk-became-biggest-meme-in-ai/>>
- Jobin, Anna, Marcello Ienca, and Effy Vayena, 'The Global Landscape of AI Ethics Guidelines', *Nature Machine Intelligence*, 1.9 (2019), 389–99
- Johnson, Deborah G., and Mario Verdicchio, 'AI Anxiety', *Journal of the Association for Information Science and Technology*, 68.9 (2017), 2267–70 <<https://doi.org/10.1002/asi.23867>>
- Knight, Will, 'Six Months Ago Elon Musk Called for a Pause on AI. Instead Development Sped Up', *WIRED*, 28 September 2023 <<https://www.wired.com/story/fast-forward-elon-musk-letter-pause-ai-development/>>
- Little, Ben, and Alison Winch, *The New Patriarchs of Digital Capitalism*, 0 edn (Routledge, 2021)
<<https://doi.org/10.4324/9780429291005>>
- Matthews, Malcolm, 'Ex Machina and the Fate of Posthuman Masculinity: The Technical Death of Man', *Journal of Posthuman Studies*, 2.1 (2018), 86–105
<<https://doi.org/10.5325/jpoststud.2.1.0086>>
- Morozov, Evgeny, *To Save Everything, Click Here: The Folly of Technological Solutionism* (PublicAffairs, 2013)
- Nachtwey, Oliver, and Timo Seidl, 'The Solutionist Ethic and the Spirit of Digital Capitalism', 2020
<<https://edoc.unibas.ch/76426/>> [accessed 30 October 2023]
- OpenAI, 'How Should AI Systems Behave, and Who Should Decide?', 2023
<<https://openai.com/blog/how-should-ai-systems-behave#OpenAI>> [accessed 30 October 2023]
- Red, Earl, 'Conquering AI-Nxiety: How to Stay On Top of AI', *Medium*, 2023
<<https://medium.com/@earlred/conquering-ai-nxiety-how-to-stay-on-top-of-ai-bb368becb110>> [accessed 1 November 2023]
- Richardson, Kathleen, *An Anthropology of Robots and AI: Annihilation Anxiety and Machines*, Routledge Studies in Anthropology Ser (Hoboken: Taylor and Francis, 2015)

- Ruby, Ariella, *GENDERING THE POSTHUMAN: THE INTERSECTION OF GENDER, TECHNOLOGY, AND CONTROL ON THE CYBORG BODY IN GARLAND'S Ex Machina*, 2022
<<https://journals.mcmaster.ca/aletheia/issue/download/172/99#page=23>>
- Samuel, Sigal, 'Elon Musk Wants to Merge Humans with AI. How Many Brains Will Be Damaged along the Way?', *Vox*, 2023 <<https://www.vox.com/future-perfect/23899981/elon-musk-ai-neuralink-brain-computer-interface>> [accessed 1 November 2023]
- Tyson, Alec, 'Growing Public Concern about the Role of Artificial Intelligence in Daily Life', 2023
<<https://www.pewresearch.org/short-reads/2023/08/28/growing-public-concern-about-the-role-of-artificial-intelligence-in-daily-life/>>
- Ulf Mellström, 'Masculinity Studies and Posthumanism', in *Routledge International Handbook of Masculinity Studies* (Routledge, 2019), pp. 112–22
<<https://doi.org/10.4324/9781315165165-11>>
- Wajcman, Judy, *TechnoFeminism* (John Wiley & Sons, 2013)
- YouTube, 'Elena Esposito: Future and Uncertainty in the Digital Society', 2023
<<https://www.youtube.com/watch?v=zb18MZn9les>>
- Zitron, Ed, 'We Don't Need CEOs Anymore and AI Could Easily Replace Them', *Insider*, 13 September 2023 <<https://www.businessinsider.com/ceo-replace-ai-job-employees-executives-save-money-salary-2023-9>>